

FIG. 1

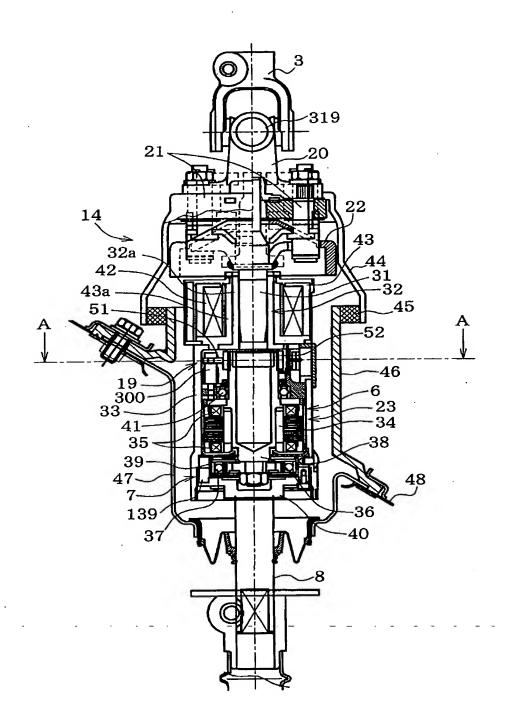


FIG. 2

OBLON, SPIVAK, ET AL DOCKET #: 240931US2 INV: Kazumasa KODAMA, et al. SHEET 3 OF 15

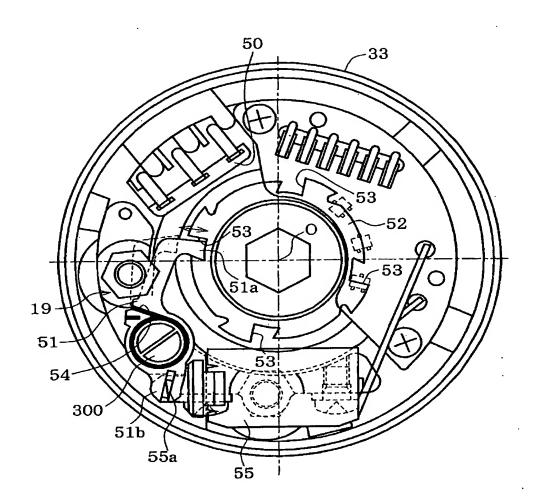


FIG. 3

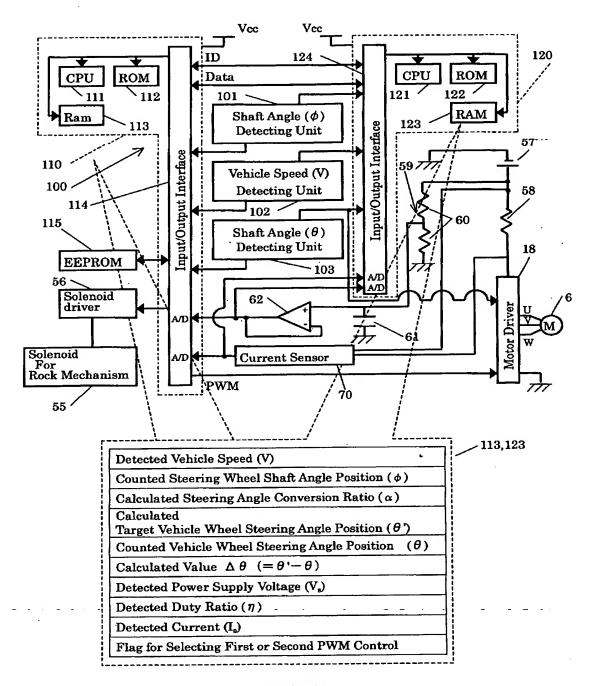
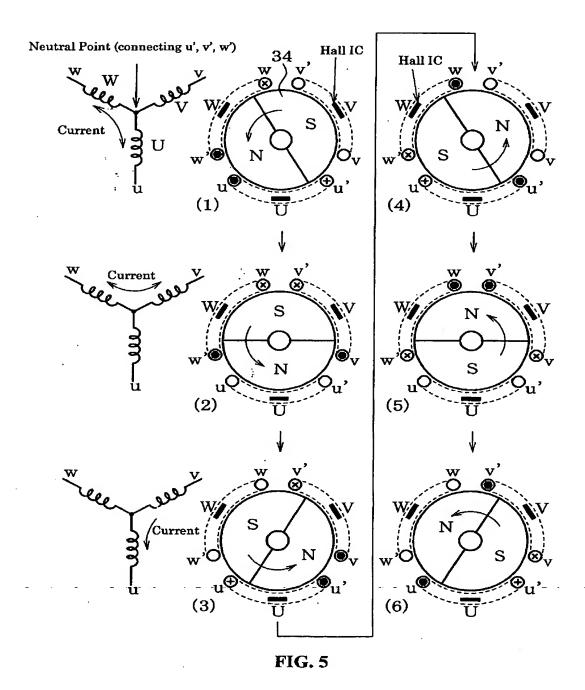


FIG. 4



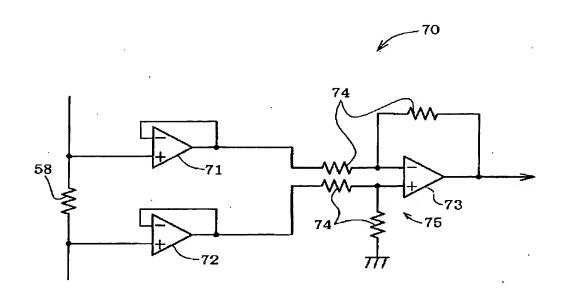


FIG. 6

::

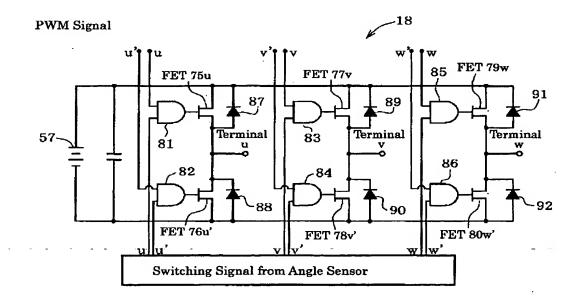


FIG. 7

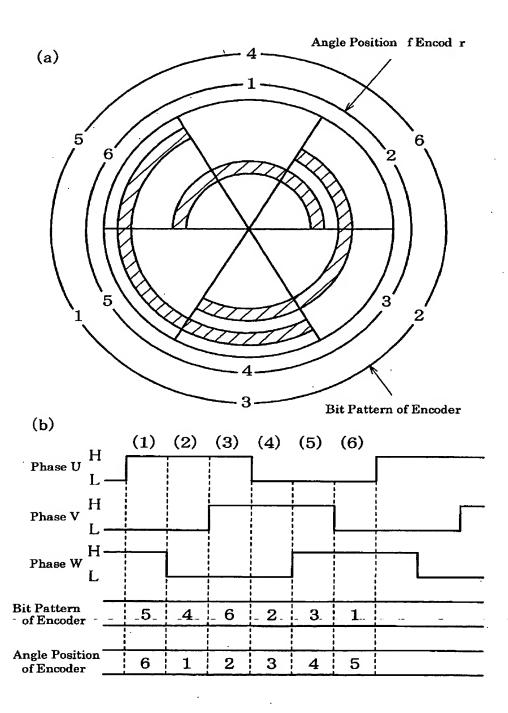


FIG. 8

130				
Vehicle Speed (V)	V_1	V_2	$\mathbf{V_{s}}$	 V _n
Steering Angle Conversion Ratio (α)	a_1	a_2	α_3	$\alpha_{\mathbf{n}}$

 $\alpha = \theta / \phi$ ϕ : Steering wheel shaft angle position

 $\boldsymbol{\theta}$: Vehicle wheel steering shaft angle position

FIG. 9

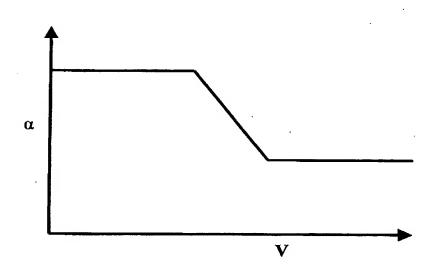


FIG. 10

131_

Vs Δ θ	Vs ₁	Vs ₂	Vs ₃	Vs ₄	•••	Vs _n
Δθ1	η_{11}	η_{12}	η_{13}	η ₁₄	•••	η_{1n}
Δ θ 2	η_{21}	η ₂₂	η ₂₃	η 24	• • •	η_{2n}
Δθ3	η_{31}	η 32	η ₃₃	η 34	• • •	η_{3n}
Δ θ4	η_{41}	η_{42}	η ₄₃	η 44	•••	$\eta_{4\mathrm{n}}$
•	•	:	•	•	•	
$\Delta \theta_{\mathbf{m}}$	$\eta_{ extbf{ml}}$	$\eta_{\mathrm{m}2}$	$\eta_{ ext{m3}}$	$\eta_{ m m4}$	• • •	$\eta_{ ext{mn}}$

 η : Duty Ratio $\Delta \theta = \theta' - \theta$

 θ : Target vehicle wheel steering shaft angle position θ : Current vehicle wheel steering shaft angle position

FIG. 11

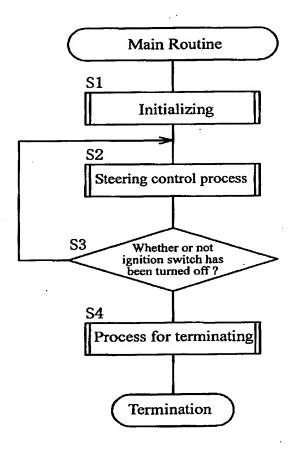


FIG. 12

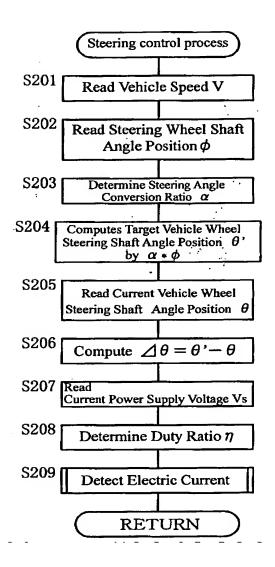
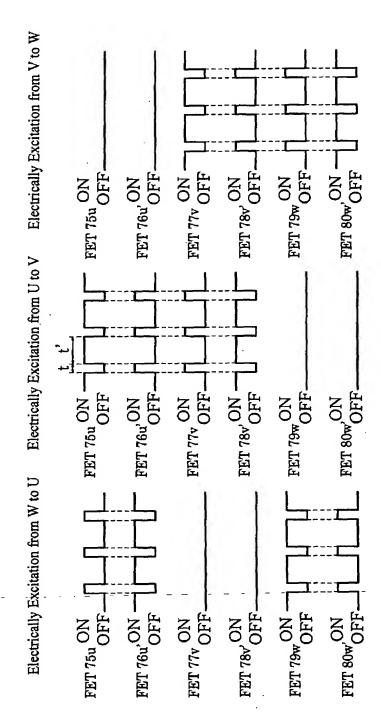


FIG. 13

' Electrically Excitation from V to W	FET 75u ON OFF	FET 76u, ON OFF	FET 77v ON OFF	FET 78v' ON OFF	FET 79w ON OFF	FET 80w, ON OFF
J Electrically Excitation from U to V	FET 75u ON OFF	FET 76u, ON OFF	FET 77v ON OFF	FET 78v' ON OFF		FET 80w, ON OFF
Electrically Excitation from W to U	FET 75u ON OFF	FET 76u, ON OFF	FET 77v OFF	FET 78v' OFF	FET 79w ON	FET 80w, ON

TG. 14



IG. 15

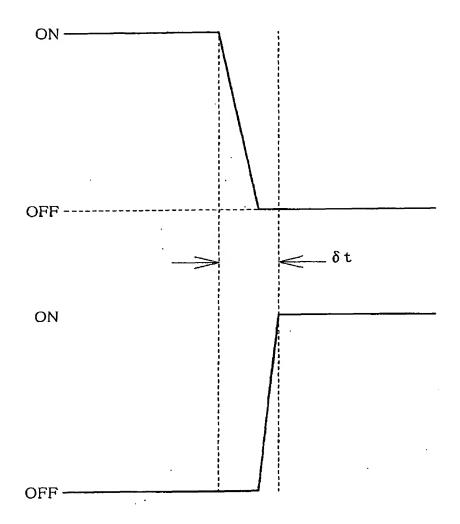


FIG. 16

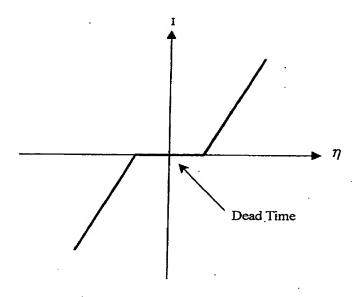


FIG. 17

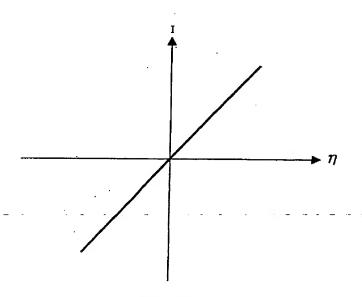


FIG. 18